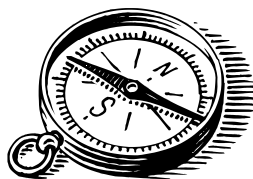




Conservation Compass

Joplin Area Outreach & Education



July
August
September
2009



Hot, dry summer days in Missouri can seem unbearable. Especially if you are walking across an asphalt parking lot with the heat of the sun on your back and the heat radiating up off the blacktop. In deserts or on some of Missouri's glades one may experience similar heated conditions. These conditions are extreme not only for people but for plants and animals as well.

Missouri's glades resemble desert like conditions - where prickly pear cactus, Missouri tarantulas, and roadrunners call home.

Hot, Rocky and Teeming with Life?

The glades around Joplin are mostly an open rock landscape with layers of rocks or rock outcroppings sprinkled with thin layers of soil and the occasional tree or two. These sunny, open areas have plants that have adapted to these harsh conditions. Some plants are covered with thick hairs on leaves and stems that allow the plant to conserve water and slow the process of transpiration. Others are able to control the small openings on the leaves that allow water loss to the air and virtually shut the openings during severely dry conditions. The prickly pear cactus' thick succulent leaves have the ability to store water for use during extreme droughts, while other plants have extremely long root systems that grow down through cracks in the rocks to the precious ground water below.



continued in Badger's Burrow, page 2....

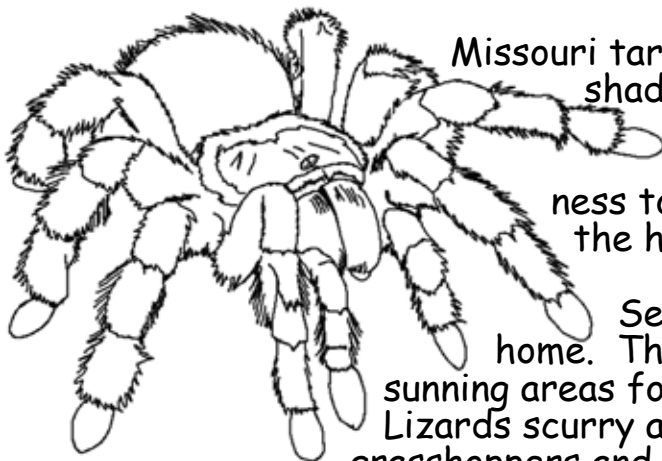


Kevin Badgley
Community Outreach Specialist
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front page....

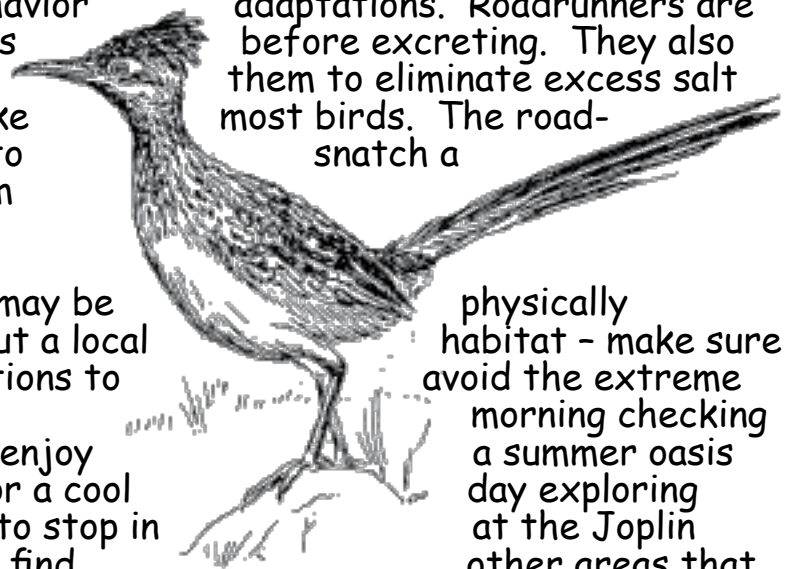


Hot, Rocky and Teeming with Life?



Missouri tarantulas, the state's largest spider, seek shade between crevices in rocks, or hole up in small underground burrows during the light of day. This spider uses the cloak of darkness to hunt unsuspecting prey as well as escape the heat of the day.

Several species of lizards also call the glades home. The hot, sun-baked rocks provide excellent sunning areas for these and other cold-blooded critters. Lizards scurry amongst the rocks in search of crickets, grasshoppers and other insects to dine upon. Life isn't all sunning and dining as the lizards must be on watchful lookout for the ever-quick roadrunner. This amazing bird covets snakes, insects, small birds, and can make quick work of an unsuspecting lizard on the glade. Roadrunners survive the extreme heat due to both body and behavior adaptations. Roadrunners are able to reabsorb water from its feces before excreting. They also have a special nasal gland that allows them to eliminate excess salt instead of using their urinary tract like most birds. The road-runners extreme quickness allows it to snatch a dragonfly or even a hummingbird from midair.



Exploring any habitat in the summer may be demanding. If you decide to check out a local you plan accordingly and take precautions to heat of the day. After spending the out the glades here at Wildcat Park, enjoy in the shaded trails along the creek or a cool or splashing in Shoal Creek. Be sure to stop in Conservation Office to cool down and find could be your summer oasis!

physically habitat - make sure avoid the extreme morning checking a summer oasis day exploring at the Joplin other areas that





@#&%! Surface Roots!

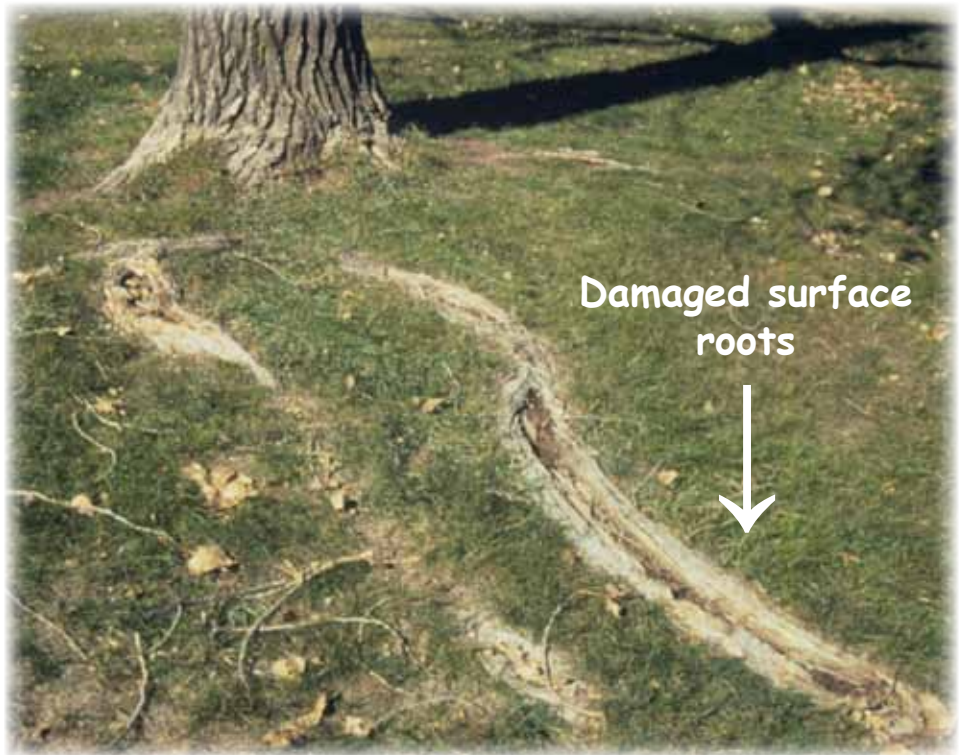
Surface roots are frustrating to many people and may cause trip hazards, make it more difficult to mow grass, get hit by mower blades, or may lift sidewalks and driveways.

Surface roots may occur for several reasons. Some species are more likely and almost guaranteed to have surface roots. If you are the proud owner of a maple, elm, sycamore, or sweet-gum, you either have or mostly likely will have surface roots.

Other species develop surface roots when soil conditions do not have adequate oxygen available for root growth. Many of our heavy clay soils naturally are like this. Construction of buildings and homes also is a source of soil compaction which drives air from the soil.

Another thing people are unaware of is almost all roots exist in the top 18 inches or less of the soil! A root that starts 2 inches below the surface and continues to grow will become exposed on the surface as it gets larger in diameter.

How should you deal with surface roots? Where at all possible, leave the roots alone and deal with the grass, and sidewalk or driveway instead. Adding a thin layer of mulch around the roots and killing the grass protects the root and reduces mowing needs. Using mulch with other plants like wild ginger add beauty and protects the roots. When adding new plants near the root, only dig a hole large enough for the plant, larger holes will damage the feeder roots and reduce flow of water and nutrients to the tree. There is nothing wrong with maintaining bare soil adjacent to roots either.



Do not add soil around and over the roots. This does not solve the problem because the root will continue to grow and will extend above ground. Also many trees are very sensitive to having soil added over their roots and will decline because of it.

Surface roots are a vital part of a tree. Removing roots randomly may cause severe damage to a tree and possibly create a dangerous situation if removed too close to the trunk. Root severance should be the last thing attempted just before total tree removal. No root should be removed within 3 times the diameter of the tree and no more than one root over multiple years. Whenever root severance is done, part of the trees ability to be healthy is reduced.

The key to remember is trees and their roots need space with adequate growing conditions. For us to keep trees, we may need to adjust to their needs and reactions to their growing site.





The **WILD SIDE** to Private Lands

Randy Haas, Private Lands Conservationist

Randy.Haas@mdc.mo.gov



YARD POLLUTION

Recently I attended a public meeting that the Spring River Watershed Committee had to inform the public about issues with the quality of water in Spring River, and to give them, the public, a chance to have input on a plan being put together to deal with these identified problems.

Let me digress just a bit here. Streams and rivers, or portions of them, can be identified as having some kind of water quality issues, usually determined by stream sampling by either a Stream Team, or some other entity...in the case of Spring River (at least that portion of the river within Jasper County), it is the Jasper County Health Department. They have been monitoring the river from different points along it for a couple of years, and have determined that a portion of the river...basically from just above Carthage to a point near Alba...has a higher than normal amount of *E. coli* bacteria. Streams and rivers may also have high counts of heavy metals, pesticides, or sedimentation levels, which may place them on what is called a 303(d) list...basically causing a concern for water quality issues in segments or portions of these water resources.

There were several good points brought up by folks who attended, for example, homeowners who put out insecticides/herbicides and fertilizers on their yards, without any knowledge about what it may be doing to the environment. How many of us have gone to a local store and purchased some grass fertilizer to make our yards greener and more lush; or had some weed problems, and we went out and got some herbicide to control them; or had grubs in our yard, so we got some insecticide to get rid of them? **Most of the time, our only goal is to get rid of the problem we are facing, forgetting about the problems we may be creating!**



In the future, maybe we can take a little harder look at what we may be doing to our environment, and make sure we really need to use that pesticide, or put on that fertilizer, or whatever. If it's that bad, at least in our mind, it might be a good idea to hire a professional lawn care service. They are trained in what to use, and how to use it effectively and safely. At least, if nothing else, read the labels you are using closely, and make sure, to the best of your ability, that you are using it safely. Compare items to see which would be most environmentally safe, or look first on the internet to see what options would be the best before you even get to the store.

Please keep these thoughts on your mind the next time you are thinking of using a pesticide...after all, we are only as healthy as our environment!



Field Guide to Your Backyard



Transformers...

blockbuster hit for the summer coming to an outdoor theater near you!

While movie goers have been anticipating the Transformer sequel being another summer box office smash for 2009, backyard enthusiasts & many gardeners often anticipate transformer heroes of another type every summer.

More and more gardeners and landscapers are keeping goldfish out of their backyard ponds and giving critters such as dragonflies, damselflies, toads, and frogs a chance to thrive. These super heroes of the backyard all play important roles that we humans appreciate.

Dragonflies entertain us with daring flights of up to 30 mph and devour scores of insects on the wing everyday. They are big mosquito eaters as adult winged crusaders and before they transform from the aquatic larva they



devour mosquito larva. Tadpoles and polliwogs transform into insect and garden pest eating machines throughout your yard.

Toads are especially admired for seeking out the slug nemesis along our foundations, sidewalks and in our gardens.

So encourage others to forgo the goldfish in the ornamental pond and go completely fishless. Your water feature will be cleaner without the fish for they tend to soil the water and the commercial fish food often makes it murky. Your backyard or patio pond will easily attract some transformer super heroes and they will bring beauty and in some cases add pleasing song and calls to your backyard wildlife oasis.

Some good tips:

- Have a small current or ripple in your pond caused by a dripper, mister, or fountain to prevent mosquito larva.
- Reduce or better yet eliminate all lawn chemical use.
- Study up on various types of biological control for the garden and lawn so it is safe for all wanted wildlife, barefoot children and pets.
- Share your findings and good news about these anticipated transformers to your neighbors so all can enjoy.

by Jeff Cantrell



Ask the Naturalist



Q: What is this?

A: This common oddity is an **insect gall**. Galls are abnormal growths on plants caused by an insect laying an egg on growing plant tissue. They are formed on several types of plants (oaks, hackberries, blackberries, etc.) and by several types of mites and insects (wasps, beetles, flies, moths). The egg irritates the plant tissue which quickly surrounds the egg: protecting and providing food until the insect matures. The shape, round balls, folded leaves, blisters, or tubes, and placement of galls will depend on the insect that caused it. Galls do not cause serious damage to their host and do not need to be removed. Some early Missourians believed galls possessed future-telling powers and several old folk remedies called for galls.

- Amy Juhala, Naturalist,
Amy.Juhala@mdc.mo.gov





Summer Events

Missouri Department of Conservation Joplin Office Program Registration

All programs are free and require registration; please contact the Joplin Conservation Office at **(417) 629-3423** to register. If you are unable to attend a program, please call to cancel so someone on the waiting list may attend.



July

8 – 11 Wednesday–Saturday, Newton County Fair, All Ages, Newton County Fair Grounds near Crowder

Check out our booth and talk with your local conservation employees!

16 Thursday, 6:30 – 8 pm, Campfire Cooking with Kids!, Families, Walter Woods Conservation Area



Are you going camping this summer? Learn some fun and tasty ways to cook up a meal with your kids. All supplies will be provided and come prepared to taste our creations!

23 Thursday, 6 – 7:30 pm, Build A Bat House, Adults and children ages 7 and up, Walter Woods Conservation Area

25 Saturday, 1 – 3 pm, Caving Adventure!, Adults and children ages 7 and up, Crystal Cave in Cassville

Bring a flashlight and a friend as we explore the underground world of Crystal Cave. This will be a moderately strenuous tour, walking along uneven paths. Please register early as space is limited.



August

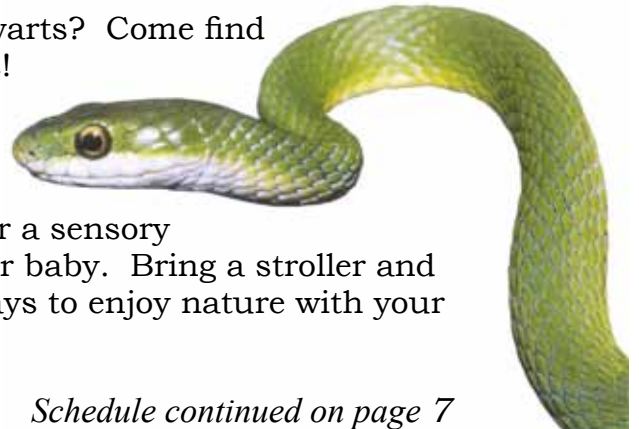
11 Tuesday, 6:30 – 8 pm, Reptiles and Amphibians, All Ages, Wildcat Glades Conservation and Audubon Center

How does a snake slither? Will toads give you warts? Come find out and meet some live reptiles and amphibians!

12 Wednesday, 9 – 10 am, Stroller Walk, Women with babies ages 0 – 2, Walter Woods Conservation Area



Attention new moms! Join us for a sensory walk through the forest with your baby. Bring a stroller and we'll share some fun and safe ways to enjoy nature with your child.



August *continued...*

15 Saturday, whistle blows at 7 am, Kid's Fishing Day, Roaring River State Park No registration required.

20 Thursday, 6:30 – 8 pm, Archery Adventure!, Families, Walter Woods Conservation Area

Gather your family and learn some basic archery skills. We will provide the equipment. Register early, as space is limited.

19 – 22 Wednesday–Saturday, Lamar Free Fair, on the square in Lamar
Check out our booth and talk with your local conservation employees!

29 Saturday, Youth Dove Hunt Clinic (Safety Workshop), Youths ages 11-15, Shawnee Trail Conservation Area

Registration and attendance of the safety workshop is mandatory to attend the Clinic on September 5th!

September

5 Saturday, Youth Dove Hunt Clinic, Youths ages 11-15, Shawnee Trail Conservation Area

Must attend the August 29th safety workshop to attend the clinic.

10 Thursday, 6 – 7:30 pm, Wildflower Hike, All Ages, Diamond Grove Prairie Conservation Area

What's bloomin' on the prairie? Come find out!

19 Saturday, Festival of Friends, All Ages, Carthage

Check out our booth and talk with your local conservation employees!

19 Saturday, 2 – 3 pm, Creek Adventure!, Families, Hickory Creek in Morse Park, Neosho

Bring your creekin' clothes and help us look for stream life! We will grab our nets and collect macroinvertebrates (aquatic insects/crayfish/insect larvae). Join us for a wet and wild time! Call for reservations and directions.

23 Wednesday, 10 – 2 pm, Conservation Begins at Home: Educator Open House, Walter Woods Conservation Area

Attention home school teachers, scout leaders, and youth leaders: Staff will be on hand to answer questions about education trunks, conservation areas, and field trip opportunities.

Pick up free material to support your curriculum.

26 Saturday,

8:30 am – 4 pm, Great Outdoors Day, All Ages, Andy Dalton Shooting Range No registration required.



Upcoming October Programs:

2 Friday, 3 – 7 pm, **Autumn Adventures**, Wildcat Glades Conservation and Audubon Center

3 Saturday, 8:30 am – 1 pm AND noon – 4 pm, **Shawnee Trail Youth Day**, Children ages 6-15, Shawnee Trail Conservation Area



Teachers, Tracks, Treks and Trails

Jeff Cantrell, Conservation Education and Outreach
Jeff.Cantrell@mdc.mo.gov

Take it Outside!



Educators take it outside and let the kids take it all in.

Outdoor classrooms come in a variety of specific themes, shapes, and sizes. It is easy for many schools, preschools, daycares, church, and youth camps to be overwhelmed with the design and maintenance of an outdoor classroom.

However, there is no need for the task of creating an outdoor learning site to be daunting. The whole concept of an outdoor classroom or learning station is very simple. No fancy landscaping, technical equipment, or amphitheater is required. Simply put, the school, youth camp, etc. needs two things:

1. A safe area for the youth to learn, observe, and perhaps play.
2. An instructor who is in charge and has the desire educate and learn alongside the kids.

The Missouri Department of Conservation has offered funding to schools for Outdoor Classrooms during the past 15 years. These competitive grants have ranged from \$500 - \$5,000 being awarded to deserving area schools. The outdoor classroom, along with life sciences curriculum, easily integrates math, reading, journaling, the fine arts, and social studies. MDC will always continue to support outdoor classrooms. But the true support is not money; it is arming the educator on how to use the story telling tree, the sidewalk, or the themed garden to compliment the existing curriculum.

As always we look forward to seeing counselors, homeschool parents, and formal teachers in our programs and educator workshops, for they bring to the kids and outdoor classroom what money can't buy - their knowledge, excitement, and willingness to learn more.





Adam Strader
McDonald County
Conservation Agent

Summer Smallmouth Bass Fishing

This southwestern corner of the state is blessed with what I believe is the finest smallmouth bass fishing in Missouri. The heat of the summer usually lowers the river's water levels and the result is superb smallmouth fishing on most of the local rivers, which include Shoal Creek, Flat Creek, Elk River, Big and Little Sugar Creeks, and Indian Creek. When the fishing is good, it is possible to catch-and-release 40+ smallmouth bass on a day's float.

Smallmouth will bite on a variety of lures from spinners to rubber worms to crank baits. Crawfish-looking lures seem to be effective, as are pumpkinseed-colored rubber worms. Don't be shy to use the good 'ol standby,

night crawlers...some of the biggest fish that I have seen caught on the river were caught on a hook with a live worm. Another effective but often overlooked bait is live crawfish. Whatever your preference of bait, you are sure to be able to catch smallmouth bass for a minimum investment. Even if you get snagged on a log, in the summer time on a river all you have to do is wade out and retrieve it, a luxury often out of reach on an area lake.



If you're interested in canoe rental, opportunities in the area are in McDonald County on the Elk River and in Newton County on Shoal Creek.

Most of these businesses have websites with all necessary information. It is advisable to float through the week if you are after the fish, but if that is not an option I still see a lot of fish caught on even the busiest days. If you have your own canoe and are looking for launch and take out points, visit the Missouri Department of Conservation's website at www.mdc.mo.gov. If floating is not your thing, bank fishing on Department accesses or private land (with permission) is normally just as productive, especially if you are willing to wade the creeks.

Finally, make sure to have everything you need to be in compliance with the law. Everyone fishing 16 or older and under 65, must have a valid Missouri Fishing Permit. These may be bought at a local vendor or online through the above website. If you plan on keeping any fish that you might catch, familiarize yourself with the size and creel limits for each fish on each stream. Statewide regulations on smallmouth bass are a 12" minimum length limit and a daily limit of 6 fish. Some streams have different limits, however, such as a 15" minimum length limit and a daily limit of 2 fish on the Elk River. Remember that these limits are in place to protect and improve the fishery.

In these hectic, computer-based times of countless modern-day distractions it might be gratifying to use an ancient form of travel to practice an even more ancient form of catching prey...both in an updated version.





Hummers of Summer

Invite Hummingbirds to Your Yard

Plant native flowers such as:

- ▶ jewelweed
- ▶ wild bergamont
- ▶ trumpet creeper
- ▶ columbine
- ▶ cardinal flower
- ▶ royal catchfly



Hang a Colorful Feeder

- Fill with 4 parts water to 1 part sugar
- Clean feeder and change nectar weekly
- Do not add food coloring (some studies show it can harm hummingbirds)



If hummingbirds seem to disappear this summer, don't worry, they are raising their brood and will return during fall migration!

- Amy Juhala, Amy.Juhala@mdc.mo.gov



The WILD Side of Cooking

Stuffed Fried Fish - from Cy Littlebee's Guide to Cooking Fish & Game

Use pan-size or whole fish.

Rub fish with seasoned salt and oil or cream about 30 minutes before cooking.

Heat frying pan or skillet previous to putting in the cooking oil. Use the amount you like best for frying or sautéing fish. For best results you will need at least $\frac{1}{4}$ " oil in the skillet. Allow one fish per person.

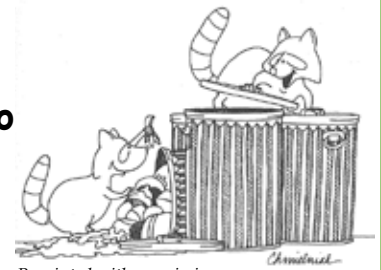
Stuffing:

1 cup cornmeal
 $\frac{1}{2}$ teaspoon salt

$\frac{1}{4}$ teaspoon black pepper
 $\frac{1}{2}$ cup hot water (enough to make the mix pasty)

$\frac{1}{4}$ teaspoon powdered garlic or 1 teaspoon of grated onion - but not both.

This makes enough for 3 or 4 small fish. Fill cavities of each fish and secure with toothpicks, then roll fish in flour or cornmeal, as you prefer and fry. The stuffing is really not to be eaten but only for flavor supreme.



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Conservation Kids



Summer is a wonderful time to be outside! Go hiking, canoeing, fishing, camping, and enjoy Missouri nature! But you need to know and avoid poison ivy.

Hint:

- Poison Ivy has white berries.
- Look for 3 leaflets.
- Poison Ivy has roots (aerial) on the stem.
- The middle leaflet is on a stem (petiole).

1



2



3



4



Poison Ivy

Box Elder

Virginia Creeper

Fragrant Sumac

Match
the picture
of the plant
to the correct
name.

Answer Key: 1. Virginia Creeper, 2. Fragrant Sumac, 3. Poison Ivy, 4. Box Elder

Missouri Conservation Frontiers

Use the above illustrations to start your report on some of Missouri's poisonous plants, activity number 17 in the Plants and Fungi Studies in the Frontiers booklet. Stop by our office or look online for "Missouri's Most Irritating Plant" brochure to assist you as well. This activity is from the MO Conservation Frontiers program. This free program helps youths learn about Missouri's natural resources and how to enjoy and protect them. As they complete the activities, they will earn points and receive special Frontiers awards! To enroll your child, classroom, or youth organization contact our office at (417) 629-3423.
- Cyndi Cogbill, Cyndi.Cogbill@mdc.mo.gov





A ranger once suggested to Warren that he "Take only pictures, leave only footprints." Muddled by the advice, Warren now takes only pictures of footprints.

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Check out our
**ADVENTURE
PROGRAMS**
this summer!

Going Green! Save postage & paper! The Conservation Compass is now available online!

If you'd like to start receiving our newsletter by e-mail please call the Joplin Conservation Office at (417) 629-3423 or e-mail

Diana.Steele@mdc.mo.gov

